

Methods of Spectroscopic Investigation of Catalytic Transformations on Metal Films S07/48-22-9-36/40

There are 2 figures, 1 table, and 3 references, 1 of which is Soviet.

ASSOCIATION: Laboratoriya molekulyarnoy spektroskopii Khimicheskogo fakul'teta Moskovskogo gos. universiteta im.M.V.Lomonosova (Laboratory of Molecular Spectroscopy at the Chemistry Department of the Moscow State University imeni M.V. Lomonosov)

Card 4/4

5(4)

AUTHORS:

Gryaznev, V. M., ~~Yagodovskiy, V. D.~~,  
Bogomol'nyy, A. M., Kho Dyu-Ok

SOV/20-121-3-29/47 ,

TITLE:

The Spectroscopic Investigation of the Adsorption and of the  
Catalytic Conversion of Cyclohexadiene on Transparent Films of  
Palladium (Spektroskopicheskoye izucheniye adsorbtsii i kataliticheskogo prevrashcheniya tsiklogeksadiyena na prozrachnykh plenkakh palladiya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 3, pp 499-502  
(USSR)

ABSTRACT:

First, some previous papers concerning this subject are discussed in a few lines. It was desirable to work out a method for spectroscopic investigation and the catalytic conversions on metal layers with a given optical density. These metal layers should, if possible, be free from foreign gases and vapors. Palladium with a thickness of  $\sim 100 \text{ \AA}$  was sublimated in a vacuum on the windows of an optical cell. These films have a noticeable catalytic activity even at room temperature. The absorption spectrum of the cyclohexadiene-1,3 vapors were replaced already after some minutes by the characteristic absorption bands of

Card 1/3

The Spectroscopic Investigation of the Adsorption      SOV/20-121-3-29/47  
and of the Catalytic Conversion of Cyclohexadiene on Transparent Films  
of Palladium

benzene vapors. This is an argument in favor of the practically total completion of the reaction  $2C_6H_8 \rightleftharpoons C_6H_6 + C_6H_{10}$ . Palladium films with a thickness of  $\sim 100 \text{ \AA}$  on fluorite windows of the cell (which was used for investigations in the infrared part of the spectrum) had a less intensive catalytic activity. The absorption spectra of cyclohexadiene are demonstrated in a number of diagrams. Palladium films which diminished the light intensity passing through (at  $2000 \text{ cm}^{-1}$ ) to 25 % of the initial one were laid on the windows of both cells. Palladium has no absorption bands in this spectral part. A further diagram demonstrates the absorption spectra for a film which absorbed 30 % of the radiation intensity of the frequency  $\text{cm}^{-1}$ . Absorption at the frequency of  $3050 \text{ cm}^{-1}$  increases when the time of contact of the cyclohexadiene vapors with the palladium films increases. The intensity of the absorption bands of cyclohexadiene is slightly diminished. Extraordinarily thin palladium films on fluorite therefore also have a catalytic activity with respect to the reaction  $2C_6H_8 \rightleftharpoons C_6H_6 + C_6H_{10}$ . There is no band of  $3050 \text{ cm}^{-1}$  in the

Card 2/3

The Spectroscopic Investigation of the Adsorption and SOV/20-121-3-29/47  
of the Catalytic Conversion of Cyclohexadiene on Transparent Films of  
Palladium

spectrum of strongly absorbed cyclohexadiene. Therefore, there are no vibrations of the bonds C - H of the groups C - H in the spectrum of cyclohexadiene strongly absorbed on palladium. A similar result was found also for very thin palladium films of rock-salt. In this case, also the band  $3050 \text{ cm}^{-1}$  was found. The spectra of strongly absorbed cyclohexadiene and the spectra of the vapors (for the pressures 12, 30 and 50 mm) have similar frequencies. The authors thank Professor V. M. Tatevskiy for his help and for discussing the results. There are 2 figures and 8 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: April 24, 1958, by A. A. Balandin, Academician

SUBMITTED: April 11, 1958

Card 3/3

5(4)

30V/20-122-3-32/57

AUTHOR: ~~Yagodovskiy, V. D.~~

TITLE: The Investigation of the Adsorption of Vapors of Benzene on Films of Palladium (Izucheniye adsorbtsii parov benzola na plenkakh palladiya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 3, pp 437-440 (USSR)

ABSTRACT: According to the results of a previous paper (Ref 1), films of palladium produced by sublimation in a high vacuum have a catalytic activity with respect to the redistribution of hydrogen in cyclohexadiene-1,3. For the investigation of the kinetics of this reaction, it was necessary to investigate the adsorption of one of its components - benzene - on palladium films. For the investigation of this adsorption the method of flowing-in (metod natekaniya) was used. The carrying out of the experiments is discussed. The kinetics of the adsorption did not complicate the finding of the isotherms. The adsorbed quantity was calculated from the difference of the flow velocities measured before and after application of the palladium film to the walls of the ad-

Card 1/3

SOV/20-122-3-32/57

## The Investigation of the Adsorption of Vapors of Benzene on Films of Palladium

sorption container. The adsorption of benzene vapors on the glass parts of the apparatus was noticeable, and this adsorption was also determined in an independent manner according to the method suggested by N. N. Kavtaradze (Ref 4). This method is discussed in a few lines. The isotherms of the adsorption of benzene vapors were found at the temperatures of  $20^{\circ}$  and  $79^{\circ}$ . A desorption occurs only at higher temperatures of the film ( $\sim 250^{\circ}$ ). For all the investigated palladium films, the share of the benzene firmly adsorbed on the surface at  $20^{\circ}$ , amounts to  $\sim 75 - 80\%$  of the total quantity of the adsorbed matter in the pressure interval

$1 \cdot 10^{-2} - 2,6 \cdot 10^{-2}$  torr. At pressures below  $5 \cdot 10^{-3}$  torr, the quantity of the firmly adsorbed matter depends on the pressure. For higher pressures, this dependence is less distinct. A surface, on which benzene is firmly adsorbed seems to be inhomogeneous and to consist of regions of 3 different sorts. The character of the inhomogeneity of the surface only slightly depends on thermal treatment. In the coordinates of the BET equation, broken lines consisting of 2 rectilinear parts are found. The isotherm of the total absorption of benzene at  $79^{\circ}$  satisfies the BET equation and the Langmuir

Card 2/3

SOV/20-122-3-32/57  
The Investigation of the Adsorption of Vapors of Benzene on Films of Palladium

(Lengmyur) equation and it has no rupture in the coordinates of these equations. In order to determine the area of the sublimated palladium films and their dependence on the sintering, the adsorption of crypton at  $-195^{\circ}\text{C}$  was investigated. The surface of the palladium film before and after thermal treatment is 13 and 10 times, respectively, greater than the geometric surface. Palladium films are adsorbents with wide pores. Finally, the isotherms of the reversible adsorption of benzene vapors are discussed. The author thanks N. N. Kavtaradze for useful advice and also his chief V. M. Gryaznov for discussing the results. There are 3 figures, 2 tables, and 8 references, 6 of which are Soviet.

PRESENTED: May 14, 1958, by M. M. Dubinin, Academician

SUBMITTED: May 5, 1958

Card 3/3



GRYAZNOV, V.M.; YAGODOVSKIY, V.D.; CHARKVIANI, M.K.

Adsorption of cyclohexene, and kinetics of its catalytic conversion  
on palladium films. Vest.Mosk.un.Ser. 2: Khim. 15 no.1:11-24  
'60. (MIRA 13:7)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.  
(Cyclohexene) (Palladium)



S/020/60/132/05/44/069  
B004/B011

5.1190  
AUTHORS:

Gryaznov, V. M., Shimulis, V. I., Yagodovskiy, V. D.

TITLE:

Influence of Adsorption<sup>1</sup> of Benzene Vapor on the Electrical Conductivity of Transparent Platinum Films of Various Surface Density

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 5, pp. 1132-1135

TEXT: The paper under review was submitted to the Konferentsiya po organicheskomu katalizu (Conference on Organic Catalysis), Moscow, November 1959. The authors investigated the influence of adsorption of benzene vapor at 20°C on the electrical conductivity of platinum films that were prepared by evaporating metals at  $1 \cdot 10^{-7}$  torr onto the walls of a glass cell. The benzene vapor was led through at a constant rate of  $(3.8 \pm 0.3) \cdot 10^{14}$  molecules per minute. The conductivity of all films dropped with rising stable adsorption of the benzene vapor. Fig. 1 shows, however, that the films behaved differently depending on their thickness

Card 1/3

Influence of Adsorption of Benzene Vapor on the Electrical Conductivity of Transparent Platinum Films of Various Surface Density S/020/60/132/05/44/069  
B004/B011

(10-50 A). In order to test the dependence of the conductivity of differently dense films on the amount of stably adsorbed benzene, experiments were conducted the results of which are given in Table 1. The authors found that the structure of the films is greatly dependent on difficultly controllable circumstances in their production. At any rate, a linear segment is shown for each film in the diagram: conductivity - number of adsorbed  $C_6H_6$  molecules. The authors assume that the linear dependence reproduces only average values, and that at  $20^\circ C$  the benzene adsorption takes place in centers with different adsorption potential. They conducted experiments in which the contact wires were connected only to the upper part of the platinum film, while the benzene vapor was let into the cell either from top or from bottom (Fig. 3). The authors conclude from the results obtained that in the sections of the film where benzene is introduced there occurs both a stable and a reversible adsorption before the stable adsorption begins at the remoter film sections, and later there occurs a rearrangement of the adsorbed molecules. Under experimental conditions, the rearrangement required about 10 minutes. ✓

Card 2/3

Influence of Adsorption of Benzene Vapor on the S/020/60/132/05/44/069  
Electrical Conductivity of Transparent Platinum B004/B011  
Films of Various Surface Density

There are 3 figures, 1 table, and 11 references: 3 Soviet, 1 Belgian,  
1 British, and 6 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: February 4, 1960, by M. M. Dubinin, Academician

SUBMITTED: January 30, 1960

4

Card 3/3

GRYAZNOV, V.M.; YAGODOVSKIY, V.D.; SHIMULIS, V.I.

Effect of thermal treatment on the catalytic properties of a  
platinum film. Kin. i kat. 2 no.2:221-227 Mr-Ap '61.

(MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet, khimicheskii fakul'tet.  
(Platinum) (Catalysts)

20358

S/020/61/136/005/016/032  
B103/B208

5-1190  
AUTHORS:

2209 1208 1274

Gryaznov, V. M., Shimulis, V. I., and Yagodovskiy, V. D.

TITLE:

Dependence of catalytic properties of metals on the degree of approach of their surface state to equilibrium

PERIODICAL:

Doklady Akademii nauk SSSR, v. 136, no. 5, 1961, 1086-1089

TEXT: In the introduction, the authors discuss the thermodynamic conditions of equilibrium of the active centers with the crystal lattice in metal catalysts, basing on the data of O. M. Poltorak, Refs. 4, 5; and Refs. 1, 3, 6. From their own studies and these data they came to the conclusion that a study of the kinetics of catalytic reactions in a wide temperature range permits conclusions as to the degree of equilibrium attained between the active centers and the crystal lattice of the catalyst. The influence of thermal treatment upon activity and selective effect of the catalyst may be explained on the basis of these data. If the assumptions of the authors are correct, the afore-mentioned kinetics may be used to clarify the influence of temperature and preceding thermal treatment. Particularly, at temperatures which do not give rise to an

Card 1/4

20358

S/020/61/136/005/016/032  
B103/B208

Dependence of catalytic properties ...

equilibrium concentration of the active centers, the degree of approach to this concentration must be mainly dependent on the cooling rate of the catalyst at elevated temperature. After quick cooling (quenching) of the catalyst the concentration of the active centers will deviate from equilibrium concentration more strongly than after slow cooling. In the case of catalytic activity of atomic structures consisting of an unequal quantity of atoms, the rates of establishing equilibrium will differ with increasing temperature; the activation energy of this process will increase from simple centers to more complicated ones. In this way, first the equilibrium concentrations of the simpler centers will be attained, and then those of the more complicated ones. The selective effect of the catalyst depends on this changed concentration of different centers. The expected effects were confirmed by the authors' experiments. Cyclohexene was dehydrogenated to benzene on a platinum film heated only up to 500°C. On a platinum film heated to 700°C in high vacuum the conversion of cyclohexene sets in only beyond 450°C, giving cyclohexadiene-1,3. Therefrom, the authors conclude that dehydrogenation to benzene takes place on more complicated centers which are less stable

Card 2/4

20358

S/020/61/136/005/016/032  
B103/B208

## Dependence of catalytic properties ...

in thermodynamic respects up to 700°C, than those yielding cyclohexadiene. The authors conclude from the fact that these more complicated centers are conserved at 500°C that the activation energy of their destruction is high. It was shown in two experimental series that the activation energy of cyclohexadiene formation between 520 and 600°C is, accordingly, 60 kcal/mole. At lower temperatures, the activity of the catalyst decreased. In the third experimental series it was 60 kcal/mole in the entire range of 450-600°C. This indicates that in this case the equilibrium concentration was attained. After quenching the film (cooling from 700 to 460°C within 4 min) the activation energy dropped to 26 kcal/mole, while the activity of the film rapidly increased. On the other hand, these values remained unchanged in the range of higher temperatures. The authors point out that the difference of the activation energies obtained,  $60 - 26 = 34$  kcal/mole, was the same as in the isomerization of allyl benzene on platinum films (Ref. 1). The authors assume therefore that the two reactions proceed on active centers in an equilibrium of the same type. If the centers out of equilibrium which are formed after quenching or in the course of the synthesis of the catalyst are of the

Card 3/4



Dependence of catalytic properties ...

20358

S/020/61/136/005/016/032  
B103/B208

same type as those being in equilibrium with the lattice of the catalyst, the formation heat of the latter may be determined by formula (8) (Ref. 2) from the difference of the activation energies obtained on the two types of centers (in equilibrium and out of equilibrium). Finally, the authors give the data obtained by other scientists (N. D. Zelinskiy and G. S. Pavlov, Ref. 8; B. V. Yerofeyev and N. V. Nikiforova, Ref. 9), which confirm their own results. There are 11 references: 9 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: September 17, 1960, by A. A. Balandin, Academician

SUBMITTED: September 16, 1960

Card 4/4

GRYAZNOV, V.M.; YAGODOVSKIY, V.D.; SAVEL'YEVA, Ye.A.; SHIMULIS, V.I.

Different catalytic activities of platinum and palladium in  
cyclohexene and cyclohexadiene conversions. Kin.i kat. 3  
no.1:99-102 '62. (MIRA 15:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova,  
khimicheskii fakul'tet.  
(Cyclohexene) (Cyclohexadiene) (Catalysis)

GRYAZNOV, V.M.; YAGODOVSKIY, V.D.

Mechanism of hydrogen redistribution in cyclohexene and 1,3-cyclohexadiene over palladium based on kinetic data. Kin. i kat. 4 no.3:404-408 My-Je '63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskii fakul'tet.  
(Hydrogene) (Cyclohexene)  
(Palladium catalysts)

YAGODOVSKIY, V.D.; GRYAZNOV, V.M.; SAVEL'YEVA, Ye.A.

Kinetics of 1,3-cyclohexadiene dehydrogenation on platinum  
films in a wide range of temperatures. Kin.1 kat. 4 no.5:  
746-752 S-O '63. (MIRA 16:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova,  
khimicheskoy fakul'tet.

DREVIN, Vladimir Petrovich; KALASHNIKOV, Yaroslav Alekseyevich;  
YAGODOVSKIY, V.D., red.

[Phase rule with a presentation of the elements of thermo-  
dynamics] Pravilo faz s izlozheniem osnov termodinamiki.  
Izd.2., perer. i dop. Moskva, Izd-vo Mosk. univ., 1964.  
454 p. (MIRA 17:6)

2

GRYAZNOV, V. M.; SHIMULIS, V. I.; YAGODOVSKIY, V. D.

"About mechanism of catalytic conversions and strong adsorption of unsaturated cyclic hydrocarbons on platinum and palladium."

report submitted to 3rd Intl Cong on Catalysis, Amsterdam, 20-25 Jul 64.

Patrice Lumumba Peoples' Friendship Univ, Moscow.

L 61918-65 EWI(m)/EPF(c)/EWP(i)/EPF(n)-2/EWP(t)/EWP(b) Pr-4/Ps-4/

Pu-4 IJP(c) JD/JG

ACCESSION NR: AP5016813

UR/0195/65/006/003/0486/0492

541.183 : 546.294 : 546.92

AUTHOR: Adamek, Ya.; Yagodovskiy, V. D.; Gryaznov, V. M.

TITLE: Adsorption of krypton on thermally treated platinum films

SOURCE: Kinetika i kataliz, v. 6, no. 3, 1965, 486-492

TOPIC TAGS: adsorption, krypton, platinum film, pyrex support, quartz support

ABSTRACT: Adsorption of krypton at  $-195^{\circ}\text{C}$  was studied on two platinum film samples which were prepared by high vacuum evaporation and subsequently activated in the  $100^{\circ}\text{--}740^{\circ}\text{C}$  range. Both film samples were repeatedly thermally treated for 10 min. at  $5 \cdot 10^{-7}$  mm Hg. The first film sample was prepared by evaporation of Pt onto a pyrex glass cylinder. Effective thickness of the Pt film was 500 angstroms. According to the krypton adsorption isotherms at  $-195^{\circ}\text{C}$  the increase of temperature of thermal pretreatment (from  $100^{\circ}$  to  $630^{\circ}\text{C}$ ) results in a substantial increase of krypton take-up and, thus, of platinum surface area. The  $\frac{1}{n}$  reciprocal (where  $n$  is a constant in the Freundlich isotherm equation) decreased with pretreatment tempera-

Card 1/3



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ACCESSION NR: AP5016813

ture and reached a minimum at 630°F. This indicates that the higher the pretreatment temperature the greater the decline in surface inhomogeneity. The second film sample was prepared by evaporation of Pt onto a quartz base. Effective thickness of this Pt film was 800 angstroms. In this case the increase of pretreatment temperature from 125° to the 300°-740°C range resulted in only a slight increase in krypton up-take. The shape of the krypton adsorption isotherms indicates that the mechanism of adsorption on Pt film on quartz is more complicated than the mechanism of adsorption on Pt film on pyrex. Also, in the case of Pt on quartz, the thermal treatment resulted in an increase of the surface homogeneity. For both Pt film samples, the increase of metal surface area after thermal treatment was partially lost when samples were cooled below room temperature. This effect is explained in terms of competing processes of formation and disappearance of surface microdefects. "The authors thank E. V. Khrapov and V. I. Shimulis for participation in discussion of this work." Orig. art. has: 1 table, 4 figures.

ASSOCIATION: Universitet druzhby narodov im. P. Lumumby, Moscow (Friendship University); Karlov universitet, Prague, CHSSR (Karlov University, ChSSR)

SUBMITTED: 13Nov68

ENCL: 00

SUB CODE: IC, GC

Card 2/3

L 61918-65

ACCESSION NR: AP5016813

NO REF SOV: 008

OTHER: 003

0

Card 3/3 *flb*

ADAMEK, Ya.; IAGODOVSKIY, V.D.; GRYAZNOV, V.M.

Adsorption of crypton on thermally treated platinum films. *Kin. i kat.*  
6 no.3:486-492 My-Ya 165. (MIRA 18:10)

1. Universitet druzhby narodov imeni Lammumbv, Moskva i Karlov  
universitet, Praga, Chekhoslovatskaya Sotsialisticheskaya  
Respublika.

ACC NR: AP7006236

SOURCE CODE: UR/0076/67/041/001/0164/0169

AUTHOR: Yagodovskiy, V. D.; Portil'ya, M.

ORG: Peoples' Friendship University im. Patrice Lumumba (Universitet druzhby narodov)

TITLE: Effect of adsorption of ammonia on the resistance temperature coefficient of gold films

SOURCE: Zhurnal fizicheskoy khimii, v. 41, no. 1, 1967, 164-169

TOPIC TAGS: ammonia, adsorption, gold, metal film, work function, electric resistance

ABSTRACT: The work function  $\phi$  of gold films (deposited on pyrex glass) before and after adsorption of ammonia was determined by measuring the electrical resistance of the films in the range of 10 to  $-10^{\circ}\text{C}$ .  $\phi$  represents the work associated with the emergence of an electron from the metal granule to the surface of the dielectric (glass). The results were treated by using the equation

$$\log (rT) = \log A + \phi / 2.3 \text{ kT},$$

where A is a constant. In all cases, before and after adsorption, the dependence of  $\log (rT)$  on  $1/T$  was linear, indicating that the films had a granular structure. A

Card 1/2

UDC: 541.183

ACC NR: AP7006236

strong adsorption of ammonia was found to decrease the work function. Reversibly adsorbed molecules are thought to interact with the layer of strongly adsorbed molecules in such a way as to decrease the positive charge at the surface of the metal granules, and this leads to an increase of the work function. Taking into consideration the two-dimensional mobility of reversibly adsorbed ammonia molecules, one can postulate that they are able to move from one metal granule to the next, and also to interact with strongly adsorbed ammonia molecules localized in the intergranular portions of the glass surface. Orig. art. has: 3 figures and 3 formulas.

SUB CODE: 07/20/ SUM DATE: none/ ORIG REF: 007/ OTH REF: 007

Card 2/2

YAGODOVSKIY, V.S. (Moskva)

Parathyroidal osteodystrophy associated with oxyphilous adenoma of an ectopic parathyroid gland. Probl. endok. i gorm. 9 no.3:106-109 My-Je '63. (MIRA 17:1)

1. Iz patologoanatomicheskogo otdeleniya (zav. - prof. T.P. Vinogradova) Tsentral'nogo instituta travmatologii i ortopedii (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N. Priorov [deceased]).

YAGODOVSKIY, V.S. (Moskva, Metrostroyevskaya ul., 17/15,kv.33)

Case of a mixed connective tissue tumor of the hip (so-called mesenchymoma). Vop. onk. 7 no. 4:96-100 '61. (MIRA 14:4)

1. Iz patologoanatomicheskogo otdeleniya (zav. - zasluzhennyy deyatel' nauki prof. T.P. Vinogradova) Tsentral'nogo instituta travmatologii i ortopedii (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N. Priurov).

(HIP JOINT—DISEASES) (CONNECTIVE TISSUES—TUMORS)



CHUMAKOV, A. A.; YAGODOVSKIY, V. S. (Moskva)

Hyperparathyroidism in combination with multiple adenomatoses  
of the endocrine glands. Arkh. pat. no.8:76-80 '61.

(MIRA 15:4)

1. Iz patologoanatomicheskogo otdeleniya (zav. - deystvitel'nyy  
chlen AMN SSSR prof. I. V. Davydovskiy) bol'nitsy No. 28 imeni  
Medsantrud (glav. vrach A. P. Timofeyeva)

(PARATHYROID GLANDS--DISEASES)

(ENDOCRINE GLANDS--TUMORS)

(ADENOMA)

KUZ'MINA, L.P.; YAGODOVSKIY, V.S. (Moskva)

Recurrences of osteoblastoclastomas of the bones in the soft tissues. Arkh. pat. no.12:39-44 '63.

(MIRA 17:11)

1. Iz otdeleniya kostnoy patologii (zav. - prof. V.Ya. Shlapober-skiy) TSentral'nogo instituta travmatologii i ortopedii (dir. - prof. M.V. Volkov).

YAGODZINSKAYA, I.B. [IAhodzys'ka, I.B.]

From the history of severe winters in the Ukraine. Geog. zbir.  
no.6:85-90 '62. (MIRA 15:9)

(Ukraine--Winter)

YAGODZINSKAYA, Ye. M.

Yagodzinskaya, Ye. M. "Hypogalactia of mothers during war-time," Trudy Azerbaydzh. nauch.-issled. in-ta okhrany materinstva i mladenchestva i pediater. kafedr Azerbaydzh. med. in-ta, Baku, 1949, p. 261-62, (In Russian and Azerbaijani).

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

AKHIMZADE, K.G.; SULEYMANOV, A.G.; YAGODZINSKAYA, Ye.M.

Pharyngoconjunctival fever in a children's boarding school  
in Baku. Azerb. med. zhur. 41 no.11:69-73 N '64.  
(MIRA 18:12)

1. Submitted Jan. 17, 1964.

EXCERPTA MEDICA Sec. 7 Vol. 12/3 Pediatrics March 58

~~YAGODZINSKAYA, E. M.~~

596. FIRST FEED OF THE NEWBORN (Russian text) - Yagodzinskaya  
E. M. - AZERBAIDZHAN. MED. ZH. 1956, 7 (66-68)

Gain in weight of 1,000 babies put to the breast 10-12 hr. after birth was compared with that of 1,000 babies put to the breast 30 min. after birth. In the first group the birth weight was regained on the 9th day in 76.5%, but in the second group only in 65.6%. The average weight gain in the first group was 150 g., and in the second 140 g. On these premises the author advocates to start breast feeding 10-12 hr. after birth. (S)

YAGODZINSKAYA, Ye. M., Cand Med Sci -- (diss) "On the blood picture of  
newborn <sup>infants</sup> ~~children~~." Baku, 1958. 15 pp (Azerbaijani State Med Inst im  
N. Narimanov), 200 copies (KL, 18-58, 104)



PASHAYEV, T.G., prof.; YAGODZINSKAYA, Ye.M.

Treatment of some childhood diseases in the health resort of  
Naftalan. Azerb.med.zhur. no.2:43-48 F '62. (MIRA 16:4)  
(NAPHTHALAN) (CHILDREN--DISEASES)

YAGOFAROV, E. Kh.

NIKULIN, A.V.; YAGOFAROV, E. Kh.

Some considerations concerning the formation of local structures  
of the lower Carboniferous. Uch. zap. Kaz. un. 116 no. 5: 198-200 '56.  
(MLRA 10:4)

1. Kafedra geologii nefti i gaza.  
(Tatar A.S.S.R.--Geology, Structural)

YAGOFAROV, E.Kh.; STEPANOV, L.A.

Granulometric characteristics of lower Carboniferous terrigenous  
sediments in the northeastern Tatar A.S.S.R. Izv. Kazan. fil.  
AN SSSR. Ser. geol. nauk no. 7:455-466 '59. (MIRA 14:4)  
(Tatar A.S.S.R.--Rocks--Analysis)

VAYNBAUM, S. Ya.; YAGOFAROV, E. Kh.

Conditions governing the formation of the Lower Carboniferous  
terrigenous layer in the Kama-Kinel' Depression. Sov. geol. 5  
no.10:104-109 0 '62. (MIRA 15:10)

1. Kuybyshevskiy nauchno-issledovatel'skiy institut neftyanoy  
promyshlennosti.

(Kuybyshev Province—Geology, Stratigraphic)  
(Orenburg Province—Geology, Stratigraphic)

YAGOLA, G.K.

Calculating the magnetic conductivity of horseshoe magnets.  
Trudy VNIIM no.1:106-115 '47. (MIRA 11:11)  
(Magnets)

YAGOLA, G.K.

Method for measuring the period of magnetic oscillations. Trudy  
VNIIM no.10:43-48 '52. (MIRA 11:6)  
(Magnetism--Measurements)

YAGOLA, G. K.

"Wattmeter Unit for Measuring Losses of Small Mass Specimens".  
Tr. Vses. n-i. in-ta Metrologii, No 24, pp 72-76, 1954

A wattmeter unit for testing the electrical quality of sheet-iron specimens of 2 kg mass was devised. The magnetizing part of the unit is built according to Dolivo-Dobrovolskiy-Epshteyn design. Formulas for computing of losses are derived. A particularly sensitive wattmeter is designed for measuring of low power. Tests of the magnetic laboratory VNIIM proved that resulting discrepancies of measurement at 10,000 and 15,000 gauss induction did not exceed 3%. (RZhFizn No 10, 1955)

SO: Sum No 812, 6 Feb 1956

YAGOLA, G.K.

YAGOLA, G.K.

Methods for magnetostriction measurements. Trudy VNIIM no.24:105-  
111 '54. (MIRA 10:12)

(Magnetostriction)



YAGOLA, G.K.; LIZOGUB, M.S.; ZINGERMAN, V.I.; BOGATYREV, Ye.Ye.

A nuclear meter for measuring strong magnetic fields. Izv.tekh.  
no.6:9-12 N-D '55. (MLA 9:3)  
(Magnetic fields--Measurement) (Nuclear magnetic moments)  
(Electronic measurements)

YAGOLA, G.K.

112-3-6144

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957,  
Nr 3, p. 157 (USSR)

AUTHOR: Yagola, G.K., Rudnyy, N.M.

TITLE: Highly Sensitive Wattmeter for Measuring Losses in  
Magnetic Sheet Materials (Vysokochuvstvitel'nyy vattmetr  
dlya izmereniya poter' v listovykh magnitnykh materialakh)

PERIODICAL: Tr. Vses. n.-i. in-ta metrol., 1956, Nr 29 (89), pp.139-149

ABSTRACT: The construction of an electrodynamic low power-factor  
wattmeter with a voltage measuring range of 30-75-150 v  
and a current measuring range of 2.5 - 5 a is described.  
The 30-v range is not an auxiliary range, as in other  
wattmeters, but is used in normal operation. The rated  
power factor is 0.1. The accuracy limit is 0.5.  
The instrument measures losses in an induction range of  
0.5 to 1.7 ~~ab~~ /m<sup>2</sup> in samples weighing 1-2 and 10 kg at  
a frequency of 50 cps. The wattmeter is provided with a  
luminous indicator. The shielding employed is effective  
in keeping the error caused by external magnetic fields

Card 1/2

112-3-6144

## Highly Sensitive Wattmeter for Measuring Losses in Magnetic Sheet Materials (Cont.)

with an intensity of up to 0.5 oersteds below 0.05% of the upper limit of measurement. Research has shown that under normal conditions electromagnetic interaction of the movable part of the instrument and the field of the stationary coils (due to the presence of traces of ferromagnetic substances in the components of the movable part) causes a deflection of the latter not exceeding 0.1% of the scale length. For calibrating the wattmeter or for d-c measurements, the current must be one-tenth of the rated current, since the wattmeter is designed for  $\cos \varphi = 0.1$ ; in this case, the error due to residual magnetization of the shield by the field of the stationary coils does not exceed 0.05%. The error due to inductance of the movable coil is kept below 0.5% by a compensating circuit. The error due to mutual inductance of the coils is not greater than 0.13%. The wattmeter is suitable for measuring losses in samples of sheet steel used in the electrical industry.

Card 2/2

G.L.G.

20377

S/058/61/000/003/020/027

A001/A001

9,6000 (and 1013,1160)

Translation from: Referativnyy zhurnal, Fizika, 1961, No. 3, p. 346, # 3E516

AUTHORS: Yagola, G. K., Lizogub, M. S.

TITLE: Reproduction of Intensity Unit of Magnetic Fields by the Nuclear Magnetic Resonance Method

PERIODICAL: "Tr. Konferentsii po elektr. izmereniyam i priborostr.", Kiyev, AN UkrSSR, 1959, pp. 61-67

TEXT: The authors designed a standard device for measuring intensity of magnetic fields by the nuclear magnetic resonance method. The device is a high-frequency oscillator whose coil of oscillation circuit is made in the form of a probe. Oscillation amplitude of the oscillator is set close to oscillation failure. To obtain the resonance line, the magnetic field being measured is modulated at a frequency of 50 cps. The amplitude of variable component is 0.05-1 oe. Possibility of frequency modulation is provided for. Nuclear magnetic resonance is observed on the mixture of plain and heavy water with addition of a small quantity of Mn sulfate. The use of three changeable probes makes it possible to

Card 1/2

"11111

20377

S/058/61/000/003/020/027  
A001/A001

Reproduction of Intensity Unit of Magnetic Fields by the Nuclear Magnetic Resonance Method

cover the range from 500 to 24,000 oe with an accuracy of  $\pm 0.01\%$ . The device is intended for measuring stable homogeneous magnetic fields.

V. Karasik

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

ZAGOLA, G.K.; ZINGERMAN, V.I.; SEPETYY, V.N.; Prinimali uchastiye:  
VELVINSKIY, A.A.; BOGATYREV, Ye.Ye.

Determining the value of the gyromagnetic ratio of protons.  
Izv.tekh. no.5:24-29 My '62. (MIRA 15:6)  
(Protons) (Magnetic measurements)

YAGOLA, G. K.

35192

S/185/62/007/002/004/016

D299/D302

S.5450

AUTHORS:

Yahola, H.K., and Bohatyr'ov, Ye.Ye.

TITLE:

Determining paramagnetic resonance frequency ratio of lithium nuclei and protons

PERIODICAL:

Ukrayins'kiy fizychnyy zhurnal, v. 7, no. 2, 1962,  
145 - 147

TEXT: The paramagnetic resonance-frequency ratio  $f_{Li}/f_p$  was determined by a method which is simple and eliminates the effect of instabilities of the magnetic field and of other factors. The specimen used was a concentrated aqueous solution of LiCl with an addition of 0.15 M FeCl<sub>3</sub> as a paramagnetic catalyzer. The specimen was kept in a thinwalled glass container 25 mm long and 3 mm in diameter. The autodyne detector coil of the measuring device was wound directly on the container. The resonance of the lithium nuclei and protons was observed on one and the same specimen; therefore the autodyne detector could be tuned to either the resonance frequency of lithium nuclei or to that of the protons. The measure-

Card 1/3

S/185/62/007/002/004/016  
D299/D302

Determining paramagnetic resonance ...

ments were conducted in a permanent magnetic field  $H_0 = 2350$  oersted ( $f_p = 10$  Mcycles,  $f_{Li} = 3.9$  Mcycles). The inhomogeneity of the magnetic field inside the specimen, did not exceed 0.05 oersted. The frequency was measured by the electronic frequency meter 49-1 (ChE-1). In order to take into account the drift of the magnetic field-strength, the measurements were made at equal time intervals, whereby the resonance frequencies of the nuclei and of the protons were measured alternatively, one after another. The mean value of the frequency ratio, obtained from a series of 10 measurements, was  $f_{Li}/f_p = 0.3886357 + 0.0000016$ , which is in good agreement with the results of other investigators. There are 3 tables and 7 references: 1 Soviet-bloc and 6 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: W.C. Dickinson, Phys. Rev., 81, 717, 1951; F. Bitter, Phys. Rev., 75, 1326, 1949; Siegbahn, G. Lindstrom, Nature, 163, 211, 1949; T. Kanda, Y. Masuda, R. Kusaka, Y. Yamagata, J. Itoh, Phys. Rev., 85, 938, 1952.

Card 2/3



Determining paramagnetic resonance ...

S/185/62/007/002/004/016  
D299/D302

ASSOCIATION: Kharkivs'kyi derzhavnyi instytut mir ta vymiryuval'-  
nykh pryladiv (Kharkiv State Institute of Measures and  
Measuring Instruments)

SUBMITTED: April 3, 1961

Card 3/3

X

ZINGERMAN, V.I.; SEPETYY, V.N.; YAGOLA, G.K.

Instrument generator with phase-sensitive voltmeter for measuring  
the stray fields of magnets. Trudy inst. kom. stand. mer i izm. prib.  
no. 67:89-93 '62. (MIRA 17:11)

1. Khar'kovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov.

ZINGERMAN, V.I.; YAGOLA, G.K.

Interpole inserts for obtaining uniform magnetic fields in instrument magnets. Trudy inst. Kom. stand. mer i izm. prib. no. 67:94-99 '62.

(MIRA 17:11)

1. Khar'kovskiy gosudarstvennyy institut mer i izmeritel'nykh pri-  
borev.

SEPETYY, V.N.; YAGOLA, G.K.; ZINGERMAN, V.I.

Changes in magnetic induction in the magnet gap caused by the introduction of weak-magnetic parts of measuring devices into the gap. Izv. tekh. no.10:47-52 0 '63. (MIRA 16:12)

ACCESSION NR AT3013126

S/2589/63/000/072/0017/0038

AUTHOR Zingerman, V. I. Sepety\*y, V. N. Yagola, G. K.

TITLE Absolute determination of the gyromagnetic ratio of the proton in strong magnetic fields

SOURCE USSR. Komitet standartov, mer 1 izmeritel'ny\*kh priborov. Trudy\* institutov Komiteta, no. 72, 1963, 17-38

TOPIC TAGS gyromagnetic ratio, proton gyromagnetic ratio, gyromagnetic ratio measurement, nickel sulfate solution

ABSTRACT Apparatus consisting of an electromagnetic with homogeneous magnetic field stabilized by proton magnetic resonance, a meter for the measurement of the distribution of the magnetic field, a magnetic balance, and apparatus for measuring the current in the coil of the balance have been developed at KhGIMIP. It is claimed that the procedure and the apparatus are better than in similar equipment developed by the National Bureau of Standards and the Physicotechnical Institute of West Germany, and that the error analysis is more comprehensive. The apparatus was used to determine the proton gyromagnetic

Card 1/1

ACCESSION NR AT3013126

ratio in an aqueous solution of  $\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$  (concentration 0.1 M). Several series of measurements were made at two values of magnetic inductions (approximately  $0.24 \text{ Wb/m}^2$  at  $f_0 \sim 10 \text{ Mcs}$  and approximately  $0.47 \text{ Wb/m}^2$ ,  $f_0 \sim 20 \text{ Mcs}$ ) yielded for the proton gyromagnetic ratio without the diamagnetic correction) a value  $\gamma = 2.67505 \times 10^8 (\text{Wb/m}^2)^{-1} \text{ sec}^{-1}$ , with a maximum error of  $\pm 0.00005 \times 10^8 (\text{Wb/m}^2)^{-1} \text{ sec}^{-1}$ . The coils of the magnetic balance and the pole pieces of the electromagnetic balance and the pole pieces of the electromagnetic were made by A. A. Vetvinskiy, the coil dimensions were measured by R. V. Dybskiy and E. P. Yanushkevich. M. S. Lizogub and Ye. G. Verbenko participated in the development of the magnetic balance and Ye. Ye. Bogatyrev and Ya. A. Zil'bershteyn participated in the preparation of the experimental electronic apparatus. Orig. art. has 8 figures, 10 formulas, and 7 tables.

ASSOCIATION VNIIFTRI

Card 2/172

YAGOLA, G.K.; ZINGERMAN, V.I.; GROBOVITSKIY, M.I.; SEPETYY, V.N.

Testing samples of hard-magnetic materials subjected to pulsed  
magnetization. Izv. tekh. no.1:40-43 Ja '65. (MIRA 18:4)

YAGOLA, V.A., geroy Sotsialisticheskogo Truda.

Operational experience in constructing preassembled bridges.  
Transp. stroi. 8 no.11:5 N '58. (MIRA 12:1)  
(Bridge construction)



YAGOLA, V.A., brigadir, Garoy Sotsialisticheskogo Truda

In Bridge Detail No.2 more and more workers are honored for  
their communist labor. Transp. stroi. 11 no.8:8-10 Ag '61.  
(MIRA 14:9)

(Kiev—Bridge construction)

ACCESSION NR: AP4035699

S/0057/64/034/005/0873/0878

AUTHOR: Pasechnik, L.L.; Kozak, O.V.; Yagola, V.V.

TITLE: Magnetic confinement of a dense current-carrying plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.5, 1964, 873-878

TOPIC TAGS: plasma, plasma filament, dense plasma, plasma confinement, magnetic plasma confinement, plasma diffusion, ambipolar diffusion, helium plasma

ABSTRACT: Dense ( $10^{12}$  to  $10^{14}$  cm<sup>-3</sup>) plasma filaments were formed in helium at pressures from 0.1 to 0.01 mm Hg. The plasma filament carried a current with current density up to  $10^3$  A/cm<sup>2</sup> and was located in a longitudinal magnetic field of 7 kOe or less. The gas pressure and longitudinal magnetic field strength were varied, and the radial density distribution in the plasma filament was measured. The density distributions were compared with calculations based on ambipolar diffusion theory. The diffusion theory accounted adequately for the observations in magnetic fields less than 3 kOe. The plasma filaments were formed in a tube 8 cm in diameter and 80 cm long and containing a hot tungsten cathode at one end and a cold anode at the other. At the beginning of the operating cycle, the cathode was overheated for a second or two

Card 1/3

ACCESSION NR: AP4035699

and a capacitor was discharged through the tube, thus producing a preliminary ionization of the gas. A 5-millisecond pulse was then applied to the magnet winding, producing the longitudinal magnetic field. After a delay of 1 to 1.5 milliseconds, giving the magnetic field time to reach a nearly constant value, a 3-millisecond rectangular pulse was applied to the discharge tube, producing the plasma filament. The density of the plasma was determined with a Langmuir probe. There is some discussion of the applicability of Bohm's formula to the present conditions, in which the ion Larmor radius is less than the radius of the probe, but it is concluded that relative densities in different parts of the plasma should be given with adequate accuracy. The electron temperature was determined from the intensity ratio of He II 4686 Å to He I 4713 Å lines; it was found to be 5 eV. The highest plasma density observed was  $5 \times 10^{14} \text{ cm}^{-3}$ , and the ionization is said to have reached 100%. The plasma density decreased rapidly with increasing distance from the axis of the tube; the rate of decrease was greater for stronger magnetic fields. In a 4.4 kOe field the density fell to half its axial value at 8 mm from the axis, and to one-tenth its axial value at 23 mm. The steady-state relation between density and radius was calculated from the theory of ambipolar diffusion, with recombination taken into account. Bessel's equation of zero order is derived for the square of the density (this equation was also obtained by N.Rynn and N.D'Angello (Rev.Sci.Instr.31,1326,1960)), and the

Card

2/3

ACCESSION NR: AP4035699

solutions were fitted to the experimental curves. Good fits were obtained for radii between 1 and 3 cm. This is not astonishing, since there are three disposable parameters (two constants of integration and a parameter  $\beta$  that is theoretically proportional to the magnetic field and to the square root of the recombination coefficient). The values of  $\beta$  that gave the best fit were found to be in fact proportional to the magnetic field for field strengths less than 3 kOe. The value thus obtained for the recombination coefficient is  $3.9 \times 10^{-11} \text{ cm}^3/\text{sec}$ ; this value is of the same order of magnitude as the values obtained by others (E.Hinnow and J.E.Hirtsberg, Phys.Rev.125,795,1962; Yu.M.Aleskovskiy and V.L.Granovskiy, ZhETF 43,1253,1962), and it is concluded that diffusion accounts for the behavior of the filaments in fields up to 3 kOe. In stronger fields, some dispersing mechanism in addition to diffusion must become important. Orig.art.has: 8 formulas, 5 figures and 1 table.

ASSOCIATION: Institut fiziki AN UkrSSR, Kiev (Institute of Physics, AN UkrSSR)

SUBMITTED: 10May63

ATD PRESS: 3082

ENCL: 00

SUB CODE: ME

NR REF SOV: 006

OTHER: 007

Card 3/3

L 34379-66 EWT(l)/EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/GG/WH

ACC NR: AP6022204

SOURCE CODE: UR/0115/66/000/005/0056/0058

AUTHOR: Yagola, Yu. G. (Doctor of technical sciences); Minaychev, V. Ye.

ORG: none

TITLE: Measuring the thickness of dielectric films during deposition

SOURCE: Izmeritel'naya tekhnika, no. 5, 1966, 56-58

TOPIC TAGS: dielectric capacitor, dielectric constant, microelectronic thin film

ABSTRACT: A simple way to measure the thickness of dielectric thin films during deposition is described. The method is based on the fact that, up to several dozen

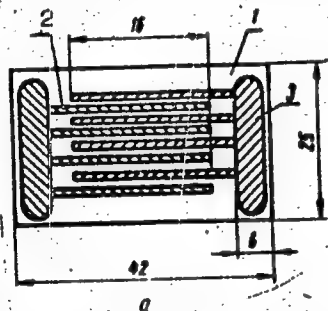


Fig. 1. Sampling capacitance

1 - Quartz substrate; 2, 3 - aluminum strips.

Card 1/3

UDC: 531.717:539.228:537.226

L 34379-66

ACC NR: AP6022204

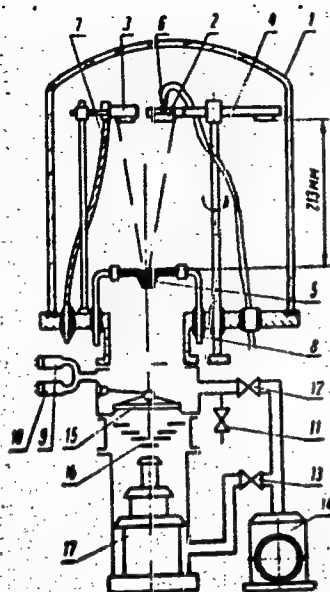


Fig. 2. Film measuring device

1 - Cover; 2 - operating substrate; 3 - capacitive sample; 4 - nine-position sample holder; 5 - vapor source; 6 - thermocouple; 7 - input leads; 8 - high current-leads; 9, 10 - manometers; 11, 12, 13 - valves; 14 - mechanical pump; 15 - high vacuum stopcock; 16 - water-cooled trap; 17 - diffusion pump.

Card 2/3

L 34379-66

ACC NR: AP6022204

microns, the thickness of the film is practically a linear function of its dielectric constant  $\epsilon$ . Thus, by using a film sample as a capacitance dielectric and observing the change in  $\epsilon$  during deposition, the authors obtain a continuous readout calibrated in microns. Fig. 1 details the sampling capacitance and Fig. 2 shows the test apparatus. To minimize temperature error, quartz was used as the sample substrate.

| Dielectric         | Deposit rate, $\mu/\text{sec}$ | Temp. $^{\circ}\text{C}$ | Recording sensitivity, $\text{pf}/\mu$ | Calibration limit of film thickness, $\mu$ |
|--------------------|--------------------------------|--------------------------|--|--|
| SiO                | $(1 \pm 5) \cdot 10^{-3}$      | 200                      | 0.27                                   | 30   |
| SbS <sub>3</sub>   | $(1 \pm 20) \cdot 10^{-3}$     | 20                       | 0.83                                   | 30   |
| Chalcogenide glass | $(0.5 \pm 20) \cdot 10^{-3}$   | 20                       | 0.33                                   | 50   |

The original calibration of the device was made against standard interferometer readings of film thickness; this step accounted for most of the error ( $\pm 6\%$ ) of the technique. The overall accuracy, within measured capacity limits of 0.1 to 50 pf, is estimated at  $\pm 8-10\%$ . The results of tests on three dielectrics are given in the table. Orig. art. has: 3 figures, 3 formulas and 1 table. [SH]

SUB CODE: 14, 09/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002/ ATD PRESS: 5034  
Card 3/3

4 0616B-67 EWT(f)/ECC GW

ACC NR: AP6033490 SOURCE CODE: UR/0413/66/000/018/0111/0111

INVENTOR: Yagorov, Yu. M.; Alekseyev, A. M.; Lantsov, A. Ye. 38  
13

ORG: none

TITLE: Device for measuring variations of the geomagnetic field. <sup>W</sup>Class 42, No. 186153  
/announced by All-Union Scientific-Research Institute of Geophysical Methods of  
Prospecting (Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov  
razvedki)/

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 111

TOPIC TAGS: geomagnetic field, magnetostatic transmitter, transmission  
ability, magnetic moment, inertia moment, silicon oil, *GEO PHYSIC  
INSTRUMENT*

ABSTRACT: A device for measurements of geomagnetic-field variations  
has been designed and built (see Fig. 1). This instrument has a mag-  
netostatic transmitter whose magnet-indicator is plate-shaped and made  
of a hard magnetic material. Its transmission ability is higher, and  
noises in the instrument are damped. The ratio of the magnetic moment  
of the magnet to its inertia moment is very important for keeping the  
optimum value of the magnetic moment; therefore, the magnet is put  
into a closed vessel filled with silicon oil. Orig. art. has: 1 figure

Card 1/2

UDC: 550.838



L 06168-67

ACC N°: AP6033490



Fig. 1. Device for measuring  
geomagnetic-field variations.  
1 - magnet-indicator; 2 - body.

SUB CODE: 08/ SUBM DATE: 09Feb63/ ATD PRESS:

Card

2/2 m<sup>le</sup>

GEL'SHTEYN, V.I.; YAGORSKAYA, T.A.

Effect of ortoaminoazotoluene on explanted normal mouse liver and on transplanted hepatomas. Vop. onk. 10 no.9:58-65 '64.

(MIRA 18:4)

1. Iz laboratorii mekhanizmov kantserogeneza (zav. - doktor med. nauk Yu.M.Vasil'yev) otdela po izucheniyu kantserogennykh agentov (zav. - deystvitel'nyy chlen AMN SSSR prof. L.M.Shabad) Instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N.Blokhin). Adres avtorov: Moskva, I-110, ul. Shchepkina, 61/2, korpus 9, Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR.

GEL'SHTEYN, V.I.; YAGORSKAYA, T.A.

Study of a simplified antigen structure in mice liver during early periods of cancerogenesis with the use of analytical immuno-electrophoresis. Biul. eksp. biol. i med. 57 no. 2:90-93 F '64. (MIRA 17:9)

1. Laboratoriya khimicheskikh kantserogennykh veshchestv (zav. - doktor med. nauk Yu. M. Vasil'yev) otdela kantserogennykh agentov (zav. - deystvitel'nyy chlen AMN SSSR prof. L.M. Shabad) Instituta eksperimental'noy i klinicheskoy onkologii (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N. Blokhin) AMN SSSR. Predstavleno deystvitel'nym chlenom AMN SSSR L.M. Shabadom.

YAGOSH

H

POLAND / Chemical Technology. Food Industry.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, .75610.

Author : Yagosh

Inst : Not given.

Title : The Production of Emmenthaler Cheese From Pasteurized Milk.

Orig Pub: Przegl. mleczarski, 1956, 4, No 11, 15-17.

Abstract: The preparation of Emmenthaler cheese from pasteurized milk requires certain changes in the technological process and foremost the use of various ferments. The latter are introduced in an amount from 0.01 to 0.15%, depending on the acidity of the milk, and consists of cultures of lactic strptococci and rod-shaped bacterias in a ratio of 1:1, or of the same cultures with the addition of butter ferments in the ratio of

Card 1/2

68

YAGOSKIN, G.I.

3

✓ 493. EXPERIENCE WITH 3000 GIP CUTTING. Yagodin, G.I. and  
Buzhkov, V.A. (Ugol (Coal), May 1974, 3, 44). A brief account of  
experimental work on coal cutter chains designed to reduce the proportion  
of fines created by cutting. (L).

YAGOTINTSEV, G.K.

Organization of central tool storage and maintenance shops at the  
Kostopol' Housing Construction Combine. Der.prom. 10 no.3:25-27  
Mr '61. (MIRA 14:3)

1. Kostopol' domostroitel'nyy kombinat.  
(Kostopol'--Building--Tools and instruments)

VOLKOV, Aleksandr Pavlovich; YAGOTINTSEV, Georgiy Nikolayevich;  
KHUDYAKOV, V.L., red.; FEDOROV, B.M., red. izd-va; PERAKHINA,  
N.L., tekhn. red.

[Instruments at the Kostopol' Housing Construction Combine]  
Instrumental'noe khoziaistvo na Kostopol'skom domostroitel'nom  
kombinate. Moskva, Goslesbumizdat, 1960. 40 p. (MIRA 13:7)  
(Woodworking machinery)

YAGOV, V.

Students help industry. NTO 2 no.12:42 D '60.

(MIRA 14:3)

1. Zamestitel' sekretarya komiteta Vsesoyuznogo Leninskogo  
Kommunisticheskogo soyuza molodezhi.  
(Moscow--Technical education)



PA 55/49T106

YAGOVDIK, N. K.

USSR/Physics  
Refractories

Nov 48

"A Study of the Effect of the Liquid Stage on the Mechanical Durability of Fire-Clay Refractories at Various Temperatures by the Method of Comparison,"  
N. K. Yagovdik, Belorussian Polytech Inst, Minsk,  
1 pp

"Dokl Ak Nauk SSSR" Vol. LXIII, No 2

Concludes: absence of a liquid phase impairs durability and limits application of refractories; mechanical durability depends on granulometric composition, and increases with increase in the

55/49T106

USSR/Physics (Contd)

Nov 48

liquid phase at normal and higher temperatures; there is a limit to this increase, beyond which the product's load resistance drops sharply.  
Submitted by Acad D. S. Belyandin 13 Sep 48.

55/49T106

Distr: 4E2c

**Effect of mineralogical and granulometric composition of**  
 some clays on the process of dry ag-  
 gregation. The clays used were: 1. Minsk  
 clay, 2. kaolin, 3. bentonite, 4. illite, 5. montmorillonite.  
 The clays were dried in a vacuum oven at 100°C for 24 hours.  
 The dry aggregates were prepared by the method of  
 the authors. The results of the experiments are shown in the  
 table. The data show that the dry aggregates of Minsk clay  
 and kaolin are more stable than those of bentonite, illite, and  
 montmorillonite. This is due to the fact that the deposits  
 of Minsk clay and kaolin are more compact and have a higher  
 content of silica and alumina. The dry aggregates of bentonite,  
 illite, and montmorillonite are more porous and have a lower  
 content of silica and alumina. The difference in the behavior of clays in dry-  
 ing is caused by the difference in mineralogical compn. of  
 their thin fractions and the content of the colloidal particles  
 in the latter. For instance, the good drying characteristics  
 of Minsk clays are explained by the absence of colloids, by  
 the presence of kaolin, and a considerable amt. of silica in the  
 thin fraction. It is necessary to decrease the amt. of col-  
 loidal particles in other clays by introduction of electrolytes,  
 by the removal of thin fractions, or by introduction of finely  
 dispersed binding agent.

YAGOVDIK, M.K., kand.tekhn.nauk, dots.; MIKHALEVICH, P.F., kand.tekhn.  
nauk, dots.; RUSAK, L.I., inzh.

Investigating the effect of several additives on the improving  
of physical and mechanical properties of saggars used by the  
Minsk Porcelain and Glazed Pottery Factory. Sbor.nauch.rab.Bel.  
politekh.inst. no.63:114-123 '58. (MIRA 12:4)  
(Saggars)

YAGOVDIK, N.K., kand.tekhn.nauk; KISEL', I.K., kand.tekhn.nauk

Effect of the addition of dehydrated clay on the physical and  
mechanical properties of ceramic body. Sbor.nauch.rab.Bel.  
politekh.inst. no.63:142-152 '58. (MIRA 12:4)  
(Ceramic materials)



MIXHALEVICH, P.F., kand.tekhn.nauk; YAGOVDIK, N.K., kand.tekhn.nauk

Possibility of producing porous materials from various white  
Russian clays. Sbor. nauch. trud. Bel. politekh. inst.

no.82:126-136 60<sup>min</sup>

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| 1ST AND 2ND GROUPS  |  |  |  |  |  |  |  |  |  |  |  |  | 3RD AND 4TH GROUPS |  |  |  |  |  |  |  |  |  |  |  |  |
| PROCESSING AND PROPERTY INDEX   |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |
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| SUBJECT INDEX   |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |
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